VEHICLE COMPASS SYSTEM WITH CONTINUOUS AUTOMATIC CALIBRATION

ABSTRACT OF THE DISCLOSURE

The compass system of the present invention utilizes an improved calibration routine in which a processing circuit of the compass recalibrates the compass each time three data points are obtained from a magnetic field sensor that meet predetermined criteria. One such criterion is that the three data points define corners of a triangle that is substantially non-obtuse. When three data points have been obtained that define a triangle meeting this criterion, the processing circuit calculates a center point for a circle upon which all three data points lie by solving the equation $x^2+y^2+Ax+By+C=0$ for A, B, and C, using the coordinate values (x,y) for the three data points and defining the center point as (-A/2, -B/2).